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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,299	07/14/2003	Francis E. Parsche	7162-99	6305
39207	7590	09/23/2004	EXAMINER	
SACCO & ASSOCIATES, PA			A, MINH D	
P.O. BOX 30999			ART UNIT	
PALM BEACH GARDENS, FL 33420-0999			PAPER NUMBER	
			2821	

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/619,299

Applicant(s)

PARSCHE ET AL.

Examiner

Minh D A

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-12 and 15-23 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/14/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 22-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 22-23,  $(1 - \cos^2 \theta)$  is vague because it is unclear whether  $\theta$  is the measurement of an angle or waveform signal.

***Claim Objections***

3. Claims 8-12 are objected to because of the following informalities:

Regarding claim 8 and claim 11, line 1, delete "the field" and insert ---a field---, claims 9 and 12, line 1, delete "the absolute value" and insert ---an absolute value---, claim 10, line 10, delete "the absolute" and insert ---a absolute---, claim 11, line 1, delete "the absolute" and insert ---an absolute---.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 6, 9-10, 12, 15, 17-23 are rejected under the best understood 35 U.S.C. 102(b) as being unpatentable by Okabe et al (US 6,462,714).

Regarding claims 1 and 17 and 22-23, Okabe discloses an antenna for RF communications comprising'. a radiating member(6) comprising an electrically conductive material and having a slot (2) extending from a first portion of said radiating member to a second portion of said radiating member (6), said radiating member (6) being substantially tubular and defining a cavity (1) therein', an impedance matching device (4) electrically connected to said radiating member (6), said impedance matching device (4) disposed to match an impedance of said radiating member (6) with at least one of an impedance of a signal source (7) and an impedance of load; and a conductor (5) operatively connecting said radiating member (6) to said impedance matching device (4); wherein said impedance matching device (4), said conductor (5), and at least a portion of said radiating member (6) are integrally formed from a single conductive sheet. See figures 1-5, col.6, lines 30-67 to col.10, lines 1-50.

Regarding claims 2 and 19, Okabe discloses wherein said non-conductive slot (3) extends along a length of said radiating member. See figures 1-3.

Regarding claims 3 and 20, Okabe discloses said radiating member (6) and said impedance matching device (4) have a common cross sectional profile. See figures 1-3.

Regarding claims 6 and 15, Okabe discloses the impedance matching device (4) is connected to the second portion of the radiating member (3). See figures 1 and 3.

Regarding claim 9, Okabe inherently discloses wherein an absolute value of the field impedance of said antenna is less than 5 ohms, because a variable impedance circuit (10) can be more or less than 5 ohms.

Regarding claims 10, 12, Okabe discloses an antenna for RF communications comprising: a radiating member(6) comprising an electrically conductive material, said radiating member (6) being substantially tubular and defining a cavity (1) therein, a non-conductive slot (3) extending from a first portion of the radiating member to a second portion of the radiating member and an impedance matching device (4) electrically connected to said radiating member (6), said impedance matching device (4) disposed to match an impedance of said radiating member (6) with at least one of an impedance of a signal source (7) and an impedance of load and inherently discloses an absolute value of the field impedance is substantially less than 50 ohms associated with said antenna, because a variable impedance circuit (10) can be more or less than 5 ohms. See figures 1-5, col.6, lines 30-67 to col.10, lines 1-50.

Regarding claim 18, Okabe discloses a single conductive structure is formed by at least one of a casting process and an extrusion process. See figures 1-10.

Regarding claim 21, Okabe discloses an electrostatic shield member (101), the electrostatic shield member (101) having a axial slot extending from the first end of the electrostatic shield member to a second end of the electrostatic shield member (101). See figure13, col.16, lines 10-53.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7-8, 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Okabe et al (US 6,462,714).

Regarding claims 7-8, 11 and 16, Okabe discloses essentially discloses the claimed invention but does not explicitly disclose that the field impedance of said antenna is less than about  $0 \pm 2j$  ohms or the impedance matching device comprises a transverse electromagnetic (TEM) feed coupler. It would have been an obvious matter of design choice to employ Okabe in any desired  $0 \pm 2j$  ohms or a transverse electromagnetic (TEM) feed coupler in order to maximize the usage of his invention, since applicant does not disclose that, all of these limitations can solve any stated problem and for any particular purpose. Therefore, it appears that the invention would not provide any improvement but merely apply the invention in different presentation.

***Allowable Subject Matter***

8. Claims 4-5, 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach that, at least one capacitor comprising at least a first conductive lead and a second conductive lead, said first conductive lead being connected to said radiating member proximate to a first side of said non-conductive slot, and said second conductive lead being connected to said radiating member proximate to a second side of said non-conductive slot recited in dependent claims 4-5, 13-14.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takei et al (US 5,977,924) and Mckinzie II et al. (US 20003/0011522) are cited to show a slot array antenna.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.


Art Unit: 2821

Examiner

Minh A

Art unit 2821

9/13/04

  
**WILSON LEE**  
**PRIMARY EXAMINER**